

**Work Order ID 56136**

Page 1

February 10, 2010 2:56:28 PM

Item ID: D205-634-041

Accept



Setup Start



Revision ID:

Item Name: Replacement Skidtube

Stop



Start Date: 2/10/10 Start Qty: 1.00



Cust Item ID:

Required Date: 2/26/10 Req'd Qty: 1.00



Customer:

Reference:

Approvals: Process Plan:

  
Date: 10/2/10

Tooling:

Date:

Run Start



QC:

Date:

SPC (Y/N):

Date:

Stop

Sequence ID/  
Work Center IDOperation  
DescriptionSet Up/  
Run HoursDraw  
NumberDraw  
Rev.Plan  
CodeAccept  
QtyReject  
QtyReject  
NumberInsp.  
Stamp

Draw Nbr

Revision Nbr

D2580

Rev D

100



DOCUMENT CONTROL

DC

Memo

Document Control

0.00

0.00

Photocopy D205-634 bluefile &amp; type labels per PPP D205-634-041 CHG002

  
N/A

110



BENDING MACHINE - SKIDTUBES

CNC Bend 1

Memo

0.00

0.00

CNC Delta 100 Bender

1-Bend as per program D2580.C on CNC Bender and Folio FT009

2-Cut tubes as per Dwg. D2580

  
M 10/2/16

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_  
 Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
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NOTE: Date & initial all entries

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QC: \_\_\_\_\_

Date: \_\_\_\_\_

SPC (Y/N): \_\_\_\_\_

Date: \_\_\_\_\_

Stop

Sequence ID/  
Work Center IDOperation  
DescriptionSet Up/  
Run HoursDraw  
NumberDraw  
Rev.Plan  
CodeAccept  
QtyReject  
QtyReject  
NumberInsp.  
Stamp

120



Skidtubes

Memo

0.00

Skidtubes

1- Deburr ends

2- C'sink holes as per dwg without cutting fluid

3- Prepare tube for welding, remove alodine as required.

4- Scribe batch number insied aft end of tube.

*3 8E 10/02/17*

130



QC

Quality Control

QC5- Inspect part completeness to step on W/O

0.00

*S 10/02/17*

Memo

0.00

*70*

W/O:		WORK ORDER CHANGES					
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Date:

SPC (Y/N):

Date:

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Sequence ID/  
Work Center IDOperation  
DescriptionSet Up/  
Run HoursDraw  
NumberDraw  
Rev.Plan  
CodeAccept  
QtyReject  
QtyReject  
NumberInsp.  
Stamp

140



Skidtubes

Memo

0.00

1-Weld step D2576 as per Dwg. D2580 and QSI 004  
A/R~~000~~ Aluminum Rod*m113207**SE 10/21/18*2-Prep per QSI 005 and weld crossbolt spacers D2579 as per Dwg. D2580, QSI  
004.For D2579 spacers, weld one side, pass 3/8" drill, weld other side, pass 3/8" drill  
A/R~~000~~ Aluminum Rod*m113207**SE 10/21/18**DP 10-2-22*

3-Grind welds as per Dwg D2580 Grind flush ridge made from bending

4-Drill holes for wearplates using DT 8217 & DT8937 Open holes to 19/64",  
adjust stopper not to hit web. Deburr5-Counterbore crossbolt spacers to 7/16" ID x 1.0" deep as per Dwg D2580.  
Deburr holes

6-Drill pilot holes for aft cap using DT 8215Open holes to 0.208". Deburr

7-Drill pilot holes for Tow ring using DT8091, open to .640"and Deburr

*10-2-23*

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

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Date:

Tooling:

Date:

Run Start



QC:

Date:

SPC (Y/N):

Date:

Stop

Sequence ID/  
Work Center ID

150



QC

Quality Control

Operation  
Description

QC10- Inspect visual per QSI004- ground welds

Set Up/  
Run Hours

0.00

Draw  
Number

Rev.

Plan  
CodeAccept  
QtyReject  
QtyReject  
NumberInsp.  
Stamp

S 10/24

160



QC

Quality Control

QC5- Inspect part completeness to step on W/O

0.00

S 10/24

40

170



HandFinish

Hand Finishing

Pressure Wash per QSI005 4.3

0.00

PAR 09-043

0.00

BL 10-03- 1

D

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

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Reference:

Approvals: Process Plan: \_\_\_\_\_ Date: \_\_\_\_\_

Tooling: \_\_\_\_\_ Date: \_\_\_\_\_

Run Start



QC: \_\_\_\_\_ Date: \_\_\_\_\_

SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_

Stop

Sequence ID/  
Work Center ID

180



Powdercoat

Operation  
Description

White Gloss(Ref:4.3.5.1) per QSI005 4.3-Alum

Set Up/  
Run HoursDraw  
NumberDraw  
Rev.Plan  
CodeAccept  
QtyReject  
QtyReject  
NumberInsp.  
Stamp

0.00

=&gt; M 10/03/02

(X) ✓

Powder Coating

Memo

START TIME: 7:30AM  
OVEN TEMPERATURE: 320°F  
FINISH TIME: 8:00AM

0.00

190



QC

QC3- Inspect Part Finish

Memo

0.00

BK 10-3-4

(D)

Quality Control

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_  
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Approvals: Process Plan:

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Date:

Run Start



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SPC (Y/N):

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Stop

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DescriptionSet Up/  
Run HoursDraw  
NumberDraw  
Rev.Plan  
CodeAccept  
QtyReject  
QtyReject  
NumberInsp.  
Stamp

200

0.00



HandFinish

Memo

0.00

Hand Finishing

1-Install inserts &amp; wearplates &amp; Gaskets as per Dwg. D2580. Use a drop of Sikaflex on insert holes before installing wearplates

A/R  Sikaflex-291 M112315Sikaflex expire date: 10/08

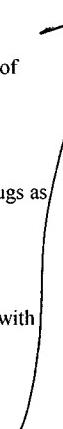
2-Coat D2594-3 O' rings with Petroleum Jelly and install on D2594-1 plugs as per Dwg D2580

3-Inspect for foreign object per QSI 024

4-Install 2855 Aft Cap as per Dwg D2580 and seal Fwd Step &amp; Aft Cap with Sikaflex. Clean excess adhesive

A/R  Sikaflex-291 M118345Sikaflex expire date: 10/08

5-Wing Walk as per Dwg D2580 and QSI 005 4.4

Batch: 113462

*PJ 10-03-14*

*D*

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_  
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Reference:

Approvals: Process Plan:

Date:

Tooling:

Date:

Run Start



QC:

Date:

SPC (Y/N):

Date:

Stop

Sequence ID/  
Work Center ID

210



QC

Quality Control

Operation  
DescriptionSet Up/  
Run HoursDraw  
NumberDraw  
Rev.Plan  
CodeAccept  
QtyReject  
QtyReject  
NumberInsp.  
Stamp

QC5- Inspect part completeness to step on W/O

0.00

S 10/03/10

(+)

220



Packaging

Packaging

0.00

Prop 3/10 C

Packaging

Memo

0.00

Identify and pack for shipping as per PPPD205-634-041

Location:

PPP Rev: PPP 56118

230



QC

Quality Control

QC21- Final Inspection - Work Order Release

0.00

Memo

0.00

10/03/11 JF

JF

10-3-5

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_  
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# Picklist Print

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Work Order ID: 56136



Parent Item: D205-634-041



Parent Item Name: Replacement Skidtube

Start Date: 2/10/10

Required Date: 2/26/10

Comments: IPP Rev:N 02.08.28 IPP was QC5 in Step 27; Added QC5 to Step 30 KJ

Start Qty: 1.00

Required Qty: 1.00

IPP Rev:O 06.02.28 Added paperwork EC

IPP Rev:P 07-07-09 SS Wearplates & Gaskets JLM

Component Item ID/	Replacement	Mfg/	Bin	Primary	Last	Route	Unit of	Qty on	Remaining	Qty	Date	Status
D2580-1		Manufactured	No			110	Each	5.0000	1.0000			



205 Skidtube bent detail

## Warehouse Loc Qty Loc Code

### Location

Main Warehouse

LG

B56123

1

10/2/16

54541

5

54697

2

54721

2

1

D2576-3

Manufactured No

140

Each 141.0000 1.0000



## Warehouse Loc Qty Loc Code

### Location

Main Warehouse

ST

141

46661

94

52215

47

1

DE 10/2/18

Step (machining detail)

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
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Start Qty: 1.00

Required Qty: 1.00

IPP Rev:O 06.02.28 Added paperwork EC

IPP Rev:P 07-07-09 SS Wearplates & Gaskets JLM

Component Item ID/	Replacement	Mfg/ Manufactured	Bin No	Primary	Last	Route	Unit of Each	Qty on 147.0000	Remaining 20.0000	Qty	Date	Status
D2579						140						



Crossbolt Spacer

Warehouse                    Loc Qty                    Loc Code

Location

Main Warehouse

LG	25	
51525	4	
53780	3	
54543	18	

Main Warehouse

ST	122	
43988	4	
46434	4	
46956	2	
47797	9	
48272	2	
51314	71	
51315	30	

856145

x20

SE 10/02/18

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

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IPP Rev. O 06.02.28 Added paperwork EC  
IPP Rev:P 07-07-09 SS Wearplates & Gaskets JLM

**Start Qty:** 1.00

**Required Qty:** 1.00

Cap

Cap

Cap

AN3-5A



## Bolt

<u>Warehouse</u>	<u>Loc Oty</u>	<u>Loc Code</u>
<u>Location</u>		
Main Warehouse		
ST	1773	
100188 ✓	188	
105057 ✓	1585	

2 BL 10-3-4.

W/O:		WORK ORDER CHANGES					
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IPP Rev:P 07-07-09 SS Wearplates & Gaskets JLM

Start Qty: 1.00

Required Qty: 1.00

Component Item ID/ AN960JD10L	Replacement	Mfg/ Purchased	Bin	Primary	Last	Route	Unit of Each	Qty on 3,459.000	Remaining 2.0000	Qty	Date	Status
----------------------------------	-------------	-------------------	-----	---------	------	-------	-----------------	---------------------	---------------------	-----	------	--------



Washer

Component Item ID/ AN960JD10L	Replacement	Mfg/ Purchased	Bin	Primary	Last	Route	Unit of Each	<u>Warehouse</u>		<u>Loc Qty</u>	<u>Loc Code</u>	Date	Status
								Location					
ALS7-1032-130		Purchased	No			200	Each	ST	3459				
								101291	16				
								105793	49				
								110985✓	3394				

Insert

Component Item ID/ AN960JD10L	Replacement	Mfg/ Purchased	Bin	Primary	Last	Route	Unit of Each	<u>Warehouse</u>		<u>Loc Qty</u>	<u>Loc Code</u>	Date	Status
								Location					
ALS4-1032-130		Purchased	No			200	Each	ST	10511	986			
								108606	52				
								111529	130				
								111779	34				
								112772	11				
								113238	759				

W/O:		WORK ORDER CHANGES					
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IPP Rev:P 07-07-09 SS Wearplates & Gaskets JLM

Start Qty: 1.00

Required Qty: 1.00

Component Item ID/	Replacement	Mfg/ Purchased	Bin	Primary No	Last	Route 200	Unit of Each	Qty on 1,263.000	Remaining 50.0000	Qty	Date	Status
AN3C4A												



BOLT

AN960C10L



washer

Purchased No

200 Each 388.0000 50.0000



## Warehouse Loc Qty Loc Code

### Location

#### Main Warehouse

ST	1263
112314	13
112720	12
112724*	3
112829	1
112991	2
113121	64
113226	344
113422	124
113644	500
113749✓	200

50 BL10-3-4.

## Warehouse Loc Qty Loc Code

### Location

#### OFFSHORE

FG	113737	100
103585		100

50 BL10-03-4

#### Main Warehouse

ST	288
112116	128
112612	160

W/O:		WORK ORDER CHANGES					
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IPP Rev:P 07-07-09 SS Wearplates & Gaskets JLM

Start Qty: 1.00

Required Qty: 1.00

Component Item ID/	Replacement	Mfg/ Manufactured	Bin	Primary No	Last	Route 200	Unit of Each	Qty on 83.0000	Remaining 1.0000	Qty	Date	Status
D3566-13												



Gasket

Warehouse	Location	Loc Qty	Loc Code									
				Main Warehouse	FP	81	1	10-3-1.				
	53461	81										
Main Warehouse	ST	2										
	45717	1										
	50265	1										
D3566-5	Manufactured	No		200	Each	34.0000	1.0000					



Gasket

Warehouse	Location	Loc Qty	Loc Code					
				Main Warehouse	FP19	30	1	10-3-4.
	55026	18						
	55335	12						
Main Warehouse	ST	4						
	36113	1						
	46186	1						
	47318	1						
	51260	1						

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Page 6

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_  
 Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

# Picklist Print

Page 7

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Work Order ID: 56136



Parent Item: D205-634-041



Parent Item Name: Replacement Skidtube

Start Date: 2/10/10

Required Date: 2/26/10

Comments: IPP Rev:N 02.08.28 FP was QC5 in Step 27; Added QC5 to Step 30 KJ  
IPP Rev. O 06.02.28 Added paperwork EC  
IPP Rev:P 07-07-09 SS Wearplates & Gaskets JLM

Start Qty: 1.00

Required Qty: 1.00

Component Item ID/ D3566-1	Replacement	Mfg/ Manufactured	Bin	Primary No	Last	Route 200	Unit of Each	Qty on 39.0000	Remaining 2.0000	Qty	Date	Status

Gasket



D3564-11



Manufactured No

Warehouse	Loc Qty	Loc Code
Location		

Main Warehouse

FP	34	
52512	3	
54480	1	
55011	3	
55320 ✓	27	

Main Warehouse

ST	5	
46349	1	
51218	1	
51259	3	

Wearshoe



Warehouse	Loc Qty	Loc Code
Location		

Main Warehouse

FP19 55332	3	
52125	3	

Main Warehouse

ST	2	
45823	1	
50112	1	

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_  
 Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

# Picklist Print

Page 8

February 10, 2010 2:56:32 PM

Work Order ID: 56136



Parent Item: D205-634-041



Parent Item Name: Replacement Skidtube

Start Date: 2/10/10

Required Date: 2/26/10

Comments: IPP Rev:N 02.08.28 FP was QC5 in Step 27; Added QC5 to Step 30 KJ  
IPP Rev. O 06.02.28 Added paperwork EC  
IPP Rev:P 07-07-09 SS Wearplates & Gaskets JLM

Start Qty: 1.00

Required Qty: 1.00

Component Item ID/ D3564-13	Replacement	Mfg/ Manufactured	Bin	Primary No	Last 200	Route 200	Unit of Each	Qty on 23.0000	Remaining 1.0000	Qty 	Date	Status
--------------------------------	-------------	----------------------	-----	---------------	-------------	--------------	-----------------	-------------------	---------------------	---------	------	--------

Wearshoe



D3564-9



Manufactured No

Warehouse      Loc Qty      Loc CodeLocation

Main Warehouse

FP17 ✓ 11  
51611 ✓ 11

Main Warehouse

ST 12  
45409 2  
46495 10

Wearshoe

Warehouse      Loc Qty      Loc CodeLocation

Main Warehouse

FP19 ✓ 12  
55025 ✓ 12

Main Warehouse

ST 2  
44659 1  
45825 1

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W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_  
 Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

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DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

# Picklist Print

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Work Order ID: 56136



Parent Item: D205-634-041



Parent Item Name: Replacement Skidtube

Start Date: 2/10/10

Required Date: 2/26/10

Comments: IPP Rev:N 02.08.28 FP was QC5 in Step 27; Added QC5 to Step 30 KJ  
IPP Rev. O 06.02.28 Added paperwork EC  
IPP Rev:P 07-07-09 SS Wearplates & Gaskets JLM

Start Qty: 1.00

Required Qty: 1.00

Component Item ID/ D3564-5	Replacement	Mfg/ Manufactured	Bin	Primary No	Last	Route 200	Unit of Each	Qty on 44.0000	Remaining 1.0000	Qty 	Date	Status

Wearshoe



<u>Warehouse</u> <u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
OFFSHORE		
FG	2	
34806	2	
Main Warehouse		
FP19	40	
51925	1	
54772	13	
55024	12	
55333	14	
Main Warehouse		
ST	2	
45824	1	
47433	1	

10-34

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_  
 Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

# Picklist Print

Page 10

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Work Order ID: 56136



Parent Item: D205-634-041



Parent Item Name: Replacement Skidtube

Start Date: 2/10/10

Required Date: 2/26/10

Comments: IPP Rev:N 02.08.28 FP was QC5 in Step 27; Added QC5 to Step 30 KJ  
IPP Rev. O 06.02.28 Added paperwork EC  
IPP Rev:P 07-07-09 SS Wearplates & Gaskets JLM

Start Qty: 1.00

Required Qty: 1.00

Component Item ID/ D2594-3	Replacement	Mfg/ Manufactured	Bin	Primary No	Last	Route	Unit of Each	Qty on 668.0000	Remaining 16.0000	Qty	Date	Status
						200						

O-Ring, 205 Skidtube



<u>Warehouse</u> <u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
Main Warehouse		
FP	527	
51613 ✓	27	
55546 ✓	500	
Main Warehouse		
ST	141	
52502 ✓	141	

16 BR 10-3-4.  
76

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

# Picklist Print

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Work Order ID: 56136



Parent Item: D205-634-041



Parent Item Name: Replacement Skidtube

Start Date: 2/10/10

Required Date: 2/26/10

Comments: IPP Rev:N 02.08.28 IPP was QC5 in Step 27; Added QC5 to Step 30 KJ

Start Qty: 1.00

Required Qty: 1.00

IPP Rev:O 06.02.28 Added paperwork EC

IPP Rev:P 07-07-09 SS Wearplates & Gaskets JLM

Component Item ID/ D2594-1	Replacement	Mfg/ Manufactured	Bin	Primary No	Last	Route 200	Unit of Each	Qty on 705.0000	Remaining 16.0000	Qty	Date	Status

Plug, 205 Skidtube

## Warehouse Loc Qty Loc Code

### Location

#### Main Warehouse

FP	577	
54008	1	
54643	15	
55002 ✓	561	

Feb 10 - 3 - 4.

#### Main Warehouse

ST	128	
42221	16	
42807	92	
43884	3	
46435	2	
51527	9	
51757	6	

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_  
 Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

**DART**

DESIGN <i>#</i>	DRAWN BY <i>PH</i>	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED <i>#</i>	APPROVED <i>#</i>	DRAWING NO. D2580	REV. D SHEET 1 OF 3
DATE 07.02.27		TITLE 205 SKIDTUBE ASSEMBLY	SCALE NTS
A	96.09.16	NEW ISSUE	
B	96.12.02	AS MANUFACTURED	
C	98.08.26	REDRAWN, INCLUDED DEO 9094/9097	
D	07.02.27	CHANGE TO SS WEARPLATES AND GASKETS, INCLUDE DEO 9124/9183	

**RELEASED**  
07.06.28 #

QTY -041	QTY -045	Part Number	Description
X		D2580-041	SKIDTUBE ASSEMBLY
	X	D2580-045	SKIDTUBE ASSEMBLY
1	1	D2500-1-190	EXTRUSION
1	1	D2576-3	STEP
20	24	D2579	CROSS BOLT SPACER
16	16	D2594-1	PLUG
16	16	D2594-3	O-RING
1	1	D2596	205 WEB
1	1	D2855	AFT CAP
1	1	D3564-5	WEARSHOE
1	1	D3564-9	WEARSHOE
1	1	D3564-11	WEARSHOE
1	1	D3564-13	WEARSHOE
2	2	D3566-1	GASKET
1	1	D3566-5	GASKET
1	1	D3566-13	GASKET
50	50	ALS7-1032-130 or AKS7-1032-130 or AKS4-1032-130 or AELS-1032-130	INSERT
50	50	AN3C4A	BOLT
2	2	AN3-5A	BOLT
50	50	AN960C10L	WASHER
2	2	AN960JD10L	WASHER

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SUBJECT TO AMENDMENT  
WITHOUT NOTICE  
WORK ORDER  
NO. *56139*

*By 10-2-10*

#### GENERAL NOTES:

- 1) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 2) ALL DIMENSIONS ARE IN INCHES
- 3) INSERT D2596 WEB TO LOCATION SHOWN OFF AFT END OF SKIDTUBE AND BOND WEB INTO OUTER TUBE WITH NON-STRUCTURAL SIKAFLEX-241 ADHESIVE PER DART QSI 015 BEFORE BENDING. ENSURE HOLES LINE-UP.
- 4) BEND AS A SMOOTH RADIUS STARTING WITH A MAXIMUM CENTERLINE RADIUS OF 60 AND ENDING WITH A MINIMUM RADIUS OF 30. A MAXIMUM REDUCTION OF 0.200 IN DIAMETER IS ALLOWABLE IN THE BENT PORTION OF THE TUBE.
- 5) USE DART DRILL TEMPLATE TD2577-205 TO LOCATE AND DRILL Ø0.297 HOLES FOR WEARSHOE INSERTS. INSTALL ALS7-1032-130 PER SECTION D-D (50 PLACES) AFTER FINISH. INSTALL AN3C4A BOLTS AND AN960C10L WASHERS WITH SIKAFLEX-241-291.
- 6) WELDING TO BE DONE PER DART QSI 004.
- 7) FINISH:  
SEE NOTES ON  
PAGE 2 FOR D2580-041 AND  
PAGE 3 FOR D2580-045
- 8) INSERT D2594-1 PLUG C/W D2594-3 O-RING IN HOLES MARKED 'P' (BOTH SIDES OF TUBE) AFTER FINISH (16 PLACES).

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W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_  
 Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

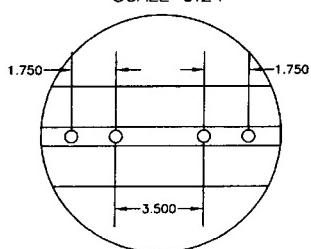
NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

w/0 56136

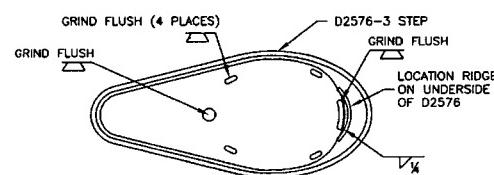
**DETAIL A**

SCALE 5:24

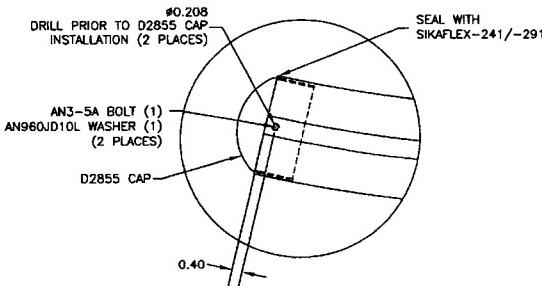


**RELEASED**  
07 de 28-01

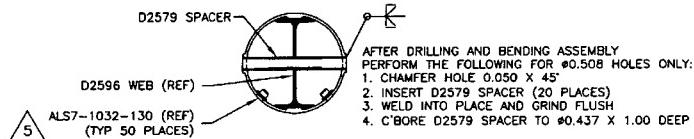
**DETAIL B**  
SCALE 5:24



**DETAIL C**  
SCALE 5:24



**SECTION D-D**  
SCALE 5:24

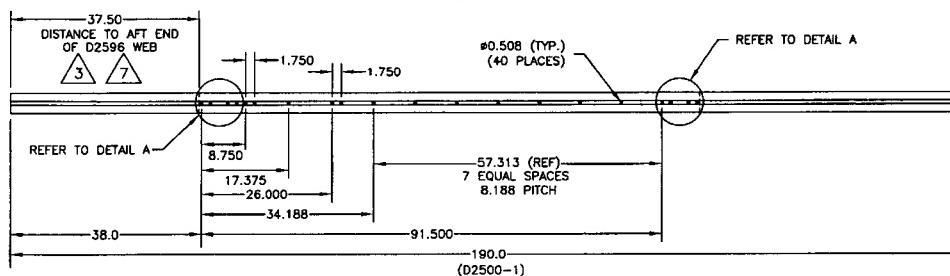


AFTER DRILLING AND BENDING ASSEMBLY  
PERFORM THE FOLLOWING FOR #0.508 HOLES ONLY:  
1. CHAMFER HOLE 0.050 X 45°  
2. INSERT D2579 SPACER (20 PLACES)  
3. WELD INTO PLACE AND GRIND FLUSH  
4. C'BORE D2579 SPACER TO #0.437 X 1.00 DEEP

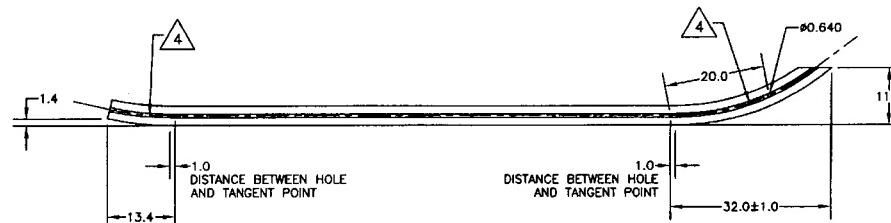
**D2580-041 NOTES**

- i) FINISH: ACID ETCH, ALODINE PER DART QSI 005 4.1 PRIOR TO INSERTING D2596 WEB  
POWDER COAT ASSEMBLY GLOSS WHITE (REF. 4.3.5.1) PER DART QSI 005 4.3  
BLACK ANTI-SKID PAINT AS INDICATED PER DART QSI 005 4.4

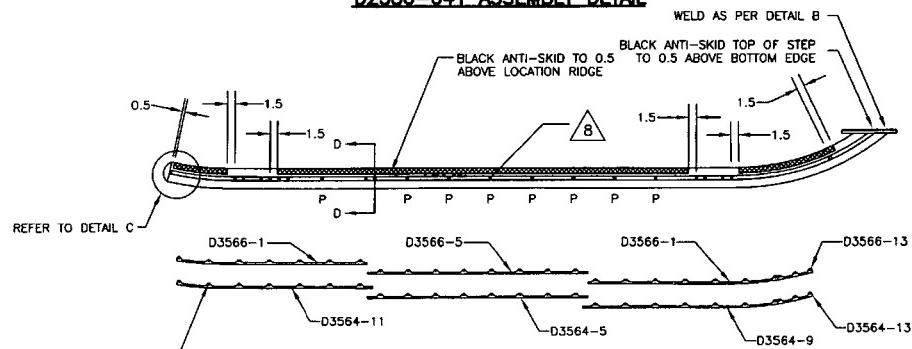
**D2580-1 DRILLING DETAIL**



**D2580-1 BENDING AND CUTTING DETAIL**



**D2580-041 ASSEMBLY DETAIL**



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DESIGN	DRAWN BY	<b>DART</b>	DART AEROSPACE LTD. HAWKSLEY, ONTARIO, CANADA
CHECKED	APPROVED	#	DRAWING NO. D2580
DATE		07.02.27	SHEET 2 OF 3 TITLE 205 SKIDTUBE ASSEMBLY SCALE 1:24

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_  
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			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries



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Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_  
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			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

NO. 226

AWS D17.1.2001  
QUALIFICATION TEST RECORD

Name: Barclay Elliott  
Job number: 56134  
Part number: D205 634.041  
Description: 205 skid tube  
Welding Process: Tig[] Mig[]  
Base materiel: Aluminium  
Current: AC[] DC[]

**TEST REQUIREMENTS AND RESULTS**

Visual: pass[] fail[]  
Penetration: pass[] fail[]

**UNACCEPTABLE**

Cracks: pass[] fail[]  
Undercut: pass[] fail[]  
Pin holes: pass[] fail[]  
Overlap (cold lap) pass[] fail[]  
Porosity (surface): pass[] fail[]  
Coloration: pass[] fail[]

Qualifier Barclay Elliott Date of Test Coupon 10-02-23

Welder Barclay Elliott Date of Test Coupon 10-02-23

The above named individual is qualified in accordance with AWS D17.1.2001 to weld